

3805

Diag. Cht. No. 8502-1, 8554-1, 8552, 8556-1

Form 504

**DEPARTMENT OF COMMERCE**  
U. S. COAST AND GEODETIC SURVEY

**C. & G. SURVEY**  
**L. & A.**  
MAR 31 1916  
Acc. No.

State: *ALASKA*

11-5613

**DESCRIPTIVE REPORT.**

Sheet No. *3805*

LOCALITY:  
*Cook Inlet Approaches*

191*5*

CHIEF OF PARTY:  
*R S Patton*

3805

Hydrography.

U. S. Coast and Geodetic Survey  
Register No. 3805

STATE Alaska.

GENERAL LOCALITY Approaches to Cooks Inlet.

LOCALITY Vicinity Port Chatham

Surveyed by Str. Explorer.

Chief of Party R. S. Patton

Date 1915.

Scale 1: 120,000

SOUNDINGS IN fathoms.

Plane of reference *M.L.L.W.*

Protracted by field party.

Soundings plotted by H. A. Seran.

Entered by *John D. Torrey*

Verified by " " "

3805  
DESCRIPTIVE REPORT

to accompany hydrographic sheet of the  
3805  
APPROACHES TO COOKS INLET

STR. EXPLORER.

R. S. PATTON, CHIEF OF PARTY.

1915.

Scale 1: 120,000.

DEPARTMENT OF COMMERCE

Hydrographic Sheet No. 3805  
Approaches to Cook Inlet, Alaska.

The positions for the work on this sheet were protracted by the field party, and have been taken as correct, being verified only in a few instances to locate an indefinite position, rather than to verify the work: as no apparent errors appear, the work is considered good.

The soundings were pencil platted by the field party, and found to be generally accurate.

This sheet is on a scale of 1-120000, and the lines are not closely run, and the soundings are quite a distance apart, but the work appears ~~sufficient~~ to be sufficient to develop conditions in a satisfactory manner. Several questionable soundings appear, but in most cases show deeper water than adjacent soundings, and therefore do not indicate danger: These questionable soundings have been left in pencil, so as they may be readily detected: A large number of soundings from sheet No 2918, adjoining in the vicinity of Egg + Ushagat Ids. ~~were~~ inked in by the field party; and, as they are also in black ink, might be considered as a part of this work, but the character of the work being lighter + small would seem to eliminate any possible confusion.

John D. Torrey  
4/4/17

Soundings are in fathoms.

DESCRIPTIVE REPORT

Hydrographic Sheet No. **3805**

1:120,000

Approaches to Cook Inlet, Alaska.

All general information pertaining to this region is given in my season's report, as such information applies equally to a number of sheets. The scope of this descriptive report is therefore limited to a statement of technical matters relating to the survey.

The instructions for this work called for the hydrography from the eastern limit of the sheet west to longitude 153°, and from the deep shown on the chart in latitude 58° 40' northward to a junction with the previous work in about the latitude of Seldovia. Lines were to be run two miles apart, with splits one mile apart in depths less than 50 fathoms. All broken areas to be developed.

The soundings were made with the Bassnett sounders. Personally, I have never found any form of pressure tube which gave satisfaction and have always been reluctant to use them; in fact, this season was the first on which I had used such tubes. The exceptional conditions which justified their use in this case, are discussed in detail in my annual report dated June 30, 1915.

In order that there might be as little uncertainty as possible in connection with the use of these tubes, a check up-and-down cast was taken about every fifth position. From these check casts arbitrary corrections to the soundings as recorded by the sounders were derived. These corrections have been applied to all the soundings, and are recorded in red in the sounding records. The significant fact developed by the use of these tubes is that no systematic corrections to the registered depths could be developed. The errors were the result of conditions not only uncertain in their nature, but also which varied from day to day.

A special development was made of the region 5 to 10 miles eastward of East Amatuli Island, where 13 and 17 fathom soundings were shown on the chart. Neither shoal nor suspicious soundings were found.

Search was also made for the "Break, E.D.", shown on the chart about 10 miles south of East Chugach Island. Broken ground of considerable extent, with a least found depth of 33 fathoms exists in this vicinity. It is not believed, however, that there is any depth shoal enough to be a menace to navigation. This opinion is based not so much upon the completeness of the development, as upon the fact that the work was done at a time when there was a considerable sea running, a sea which should have broken on any area shoal enough to be dangerous, or at least should have piled up sufficiently to be plainly visible. Heavy tide rips were encountered, but soundings placed in these <sup>rips</sup> reefs showed uniformly deep water. Lest the development actually made be considered insufficient it may be stated that because of the difficulty, even in comparatively smooth weather, of running, in the strong currents a closely spaced system of lines over this area, its development was postponed until a time when the sea was rough enough to indicate any danger by breaking or piling up, and it was because no such evidence of shoal water was observed, that a closer search was not made.

On the western half of the work, because of the regular and gently sloping bottom, it was thought best to depart slightly from the system outlined in the instructions.

Instead of changing at the 50 fathom curve, from a one to a two mile width between lines, the spacing was gradually widened from a little less than one mile at the northern limit to two miles at the southern.

The control for the work was obtained from the triangulation of the previous years. Additional signals, as needed, were determined by sextant cuts taken in the course of the hydrography, and all such cuts were recorded in the sounding records. Because of the lack of a right object for the work at eastern limit of the sheet, a wing was added to take in the coast as far eastward as Pye Islands. To prevent distortion, this wing was not pasted to the sheet, but made to be placed alongside it by means of a given distance on lines common to the two parts.

As the party was broken up immediately upon the completion of field work, the sheet was forwarded to the Office in an unfinished condition, to be completed by the various officers on duty there during the winter.

A table of statistics is attached.

Respectfully submitted,



Chief of Party.

Statistics, Sheet No. 3805

1-120000

Date, 1915.	Letter	Vol.	Positions	Sdgs.	Miles	Vessel
June 10	A	1	60	60	60.5	Explorer.
11	B		76	76	66.0	"
12	C		104	101	84.0	"
15	D		99	98	104.0	"
16	E		31	31	33.1	"
	E	2	77	74	78.9	"
17	F		65	65	73.0	"
21	G		75	75	82.5	"
25	H		8	8	4.5	"
July 1	J		79	79	77.0	"
2	K		67	65	59.0	"
	K	3	25	25	26.8	"
7	L		15	38	20.0	"
9	M		73	105	73.0	"
10	N		90	113	106.0	"
14	P		84	161	84.0	"
	P	4	10	19	11.0	"
15	Q		151	302	151.0	"
16	R		144	272	130.0	"
17	S		43	82	41.0	"
	S	5	94	146	86.0	"
19	T		46	80	39.0	"
31	U		142	187	106.0	"
August 2	V		67	81	48.5	"
	V	6	95	142	90.0	"
11	W		20	36	22.0	"
16	X		66	96	45.0	"
18	Y		119	160	91.0	"
Sept. 8	Z	7	79	118	54.0	"
9	A'		17	27	17.0	"
			<u>2121</u>	<u>2922</u>	1963.8	